Names (pair) _____ Date _____

Multiplying Improper Fractions

Example

Without cancelling: $\frac{9}{4} \times \frac{8}{3} = \frac{72}{12} = 6$

With cancelling: divide 9 and 3 by 3, and 8 and 4 by 4.

$$\frac{9}{4} \times \frac{8}{3} = \frac{\cancel{9}^{3} \times \cancel{8}^{2}}{\cancel{4}_{1} \times \cancel{3}_{1}} = \frac{6}{1} = 6$$

Remember

We multiply improper fractions just like proper ones. An answer greater than 1 is written as a **mixed number**.

1 ON YOUR OWN Multiply (cancel if you can). Write the answer as a mixed number.

$\frac{5}{2} \times \frac{7}{3} = \frac{\square}{\square} = \square\,\frac{\square}{\square}$

$\frac{4}{3} \times \frac{5}{2} = \frac{\square}{\square} = \square\,\frac{\square}{\square}$

$\frac{7}{4} \times \frac{6}{5} = \frac{\square}{\square} = \square\,\frac{\square}{\square}$

$\frac{9}{5} \times \frac{10}{7} = \frac{\square}{\square} = \square\,\frac{\square}{\square}$

$\frac{8}{3} \times \frac{7}{6} = \frac{\square}{\square} = \square\,\frac{\square}{\square}$

$\frac{3}{2} \times \frac{5}{4} = \frac{\square}{\square} = \square\,\frac{\square}{\square}$

2 IN A GROUP **The missing number.** Find the missing number. Explain how you found it.

$\frac{\square}{4} \times \frac{8}{3} = 6$

$\frac{5}{\square} \times \frac{6}{5} = 3$

$\frac{7}{3} \times \frac{\square}{7} = 2$

Names (group) _____ Date _____

3 IN PAIRS **A race.** One student works without cancelling, the other with cancelling. Who is faster? Swap roles.

Product	Without cancelling	With cancelling
$\frac{12}{5} \times \frac{10}{3}$	$\frac{\square}{\square} = \square$	$\frac{\square}{\square} = \square$
$\frac{15}{4} \times \frac{8}{5}$	$\frac{\square}{\square} = \square$	$\frac{\square}{\square} = \square$
$\frac{14}{9} \times \frac{18}{7}$	$\frac{\square}{\square} = \square$	$\frac{\square}{\square} = \square$
$\frac{21}{8} \times \frac{16}{7}$	$\frac{\square}{\square} = \square$	$\frac{\square}{\square} = \square$

4 IN A GROUP **Discuss.** Compare your answers to task 3. What are the advantages of cancelling before multiplying? When does cancelling not help?

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★ ON YOUR OWN **Exit card.** $\frac{10}{3} \times \frac{9}{4} = \frac{\square}{\square} = \square\frac{\square}{\square}$